

### **REMARKS**

All pending claims stand rejected under 35 U.S.C. § 103 as being unpatentable over Nissfolk (US 5767334) in view of Presedo (EP 0742191/US 6075174).

It is acknowledged in the rejection that Nissfolk fails to disclose “mixing the oligomerization reaction mixture with an organic constituent” to yield the crude PAO product. To compensate for this lack of teaching by Nissfolk (and Presedo), this recited step is held to occur when two reactors are used in series. Applicants respectfully disagree.

Both Nissfolk and Presedo disclose that the mixture entering the distillation column or stripping column contain unassociated/free and dissolved BF<sub>3</sub> (Nissfolk: col 3, lines 28-30; Presedo: col 3, lines 35-39). The free BF<sub>3</sub> gas exits the column in the top stream, along with the catalyst complex.

This is distinct from applicants’ invention. Subsequent to oligomerization (see para 0017 of the specification where the injection vessel is identified as being downstream from the CSTR(s); thus post-oligomerization), the stream is brought into contact with the organic constituent to fully saturate the BF<sub>3</sub>, leaving no free BF<sub>3</sub> gas going into the column. As a preliminary step to the distillation, by removal of the BF<sub>3</sub> from the product stream this ensures that the top stream leaving the column is all complexed BF<sub>3</sub>, which is then disassociated and recomplexed in the manner disclosed and recited. Thus, during the post distillation steps, excess BF<sub>3</sub> in the system which must then be disposed is substantially reduced. This results in a greater return of complexed catalyst in the recycle stream and, per the goals of the present invention, a reduction in the BF<sub>3</sub> consumption and potential undesired emissions.

Neither Nissfolk nor Presedo appreciate or direct those skilled in the art to eliminate the free BF<sub>3</sub> gas prior to separation of the products in either the distillation or stripper column during removal of the PAO product. Thus, one skilled in the art following the basic teachings of either Nissfolk nor Presedo would obtain the benefits taught by Applicant.

In failing to teach all of the recited elements, *prima facie* obviousness is not established by the present rejection. It is requested that this rejection be reconsidered in light of the teachings and claimed invention of Applicants.

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In light of this amendment, all of the claims now pending in the subject patent application are believed to be allowable. Thus, the Examiner is respectfully requested to allow all pending claims. If there are any questions regarding this amendment or the application in general, a telephone call to the undersigned would be appreciated, since this should expedite the prosecution of the application for all concerned.

Respectfully submitted,

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/Nancy T. Krawczyk/  
Nancy T Krawczyk  
Attorney for Applicants  
Registration No. 38,744

Post Office Address (to which all correspondence is to be sent)  
ExxonMobil Chemical Co.  
*Law Technology*  
P.O. Box 2149  
Baytown, Texas 77522-2149  
Phone: 281-834-2429  
Fax: 281-834-2495